All Project Descriptions
For Projects Submitted through the Hood Canal Coordinating Council
2007 Salmon Recovery Funding Board and Puget Sound Partnership Grant Round

Pope Headwaters Conservation

The Pope Headwaters Conservation Acquisition project includes 3,400 acres of forested headwaters to the Union and Tahuya River., 20 miles of tributary protection along the Union River and 10 miles of mainstem and tributary protection along the Tahuya River. Protection of these lands and headwaters to the Union and Tahuya Rivers is consistent with the Hood Canal Coordinating Council's 3 year work plan. The protection of these headwaters and tributaries, through generous timber management setbacks and extinguishment of development rights, will address long term water quality and quantity issues within these watersheds and Hood Canal, benefiting Hood Canal Summer Chum, Coho, Chinook, and Steelhead runs within these watersheds.

Noxious Weed Survey for Lower and Mid-Hood Canal

Noxious freshwater weeds are plants that are not native to Washington, are generally of limited distribution, and pose a serious threat to our state. Plants considered to be nonnative were not present in Washington prior to European settlement. Because nonnative plants have few controls in their new habitat, they spread rapidly, destroying native plant and animal habitat, damaging recreational opportunities, lowering property values, and clogging waterways. Some noxious weeds can even harm humans and animals.

Within the scope of our RFEG charter we hypothesize that there remains a need in the Hood Canal watershed to identify noxious fresh water Aquatic, Wetland & Riparian Zone Plants that pose a negative impact on salmonid populations. We therefore propose the development of a multi-level, multi-phased Noxious Weed Survey for WRIA 15 West of the Mid & Lower Hood Canal watershed. This assessment will determine noxious weed location, concentration, type and propose an eradication or containment plan as determined by law and the best available science. Moreover, we propose to demonstrate a pilot eradication program in one (1) Hood Canal sub-basin as a proof of concept and provide lessons learned for follow-up community action in the whole of the Hood Canal.

Twanoh Falls Community Club Bulkhead Removal

This project will design, construct and monitor a shoreline restoration consisting of 400 feet of private shoreline on the South shore of Lower Hood Canal. The Twanoh Falls Beach Club (homeowners association) supports the removal of an eight (8) foot bulkhead 250 feet in length astride Twanoh Falls Creek and re-contour the beach to restore historical topography and tidal processes.

Twanoh Falls Creek (WRIA #14.0132 sometimes called Forest Beach Creek) is located 0.5 miles east of Twanoh Creek and Twanoh State Park. The lower 100 meters has been channelized and the banks armored. This has reduced floodplain connectivity and habitat (WSCC, 2003). Sediment builds-up at the SR 106 culvert due to lack of transport capabilities (low gradient and low flow) in the lower reaches. However, the culvert is on the Mason County Department of Public Works (MCDPW) short list for replacement.

There are several large pools at a frequency of 30-50% in the channel (WSCC, 2003). There was one partial fish barrier in the lower reaches of Twanoh Falls Creek (~RM 0.25) (WSCC, 2003) that was removed with the addition of a new culvert by the MCDPW in 2006. Fish Stocks in the stream include Coho, Chum, Cutthroat, and Steelhead, while additional species are found in the marine environment along the bulkhead.

Skokomish Estuary Island Restoration

The Skokomish Indian Tribe, Tacoma Power, and Mason Conservation District, along with the Puget Sound Near-shore Partnership, and National Coastal Wetlands Conservation, seek to restore natural tidal hydrology to the entire Skokomish Estuary in Hood Canal. This project will obliterate island dikes and levees, roads, and borrow ditches, improving salmonid refugia, water quality and dissolved oxygen, and reduce of flooding. Phase 1, has been designed, funded, permitted, a monitoring plan created, and is in construction. Phase 2, the Nalley Island restoration was originally funded with certain IAC resources. Due to economies of scale and feasibility investigation through adaptive management, this restoration process has been modified. Landowners have agreed in principle, design has begun, with certain partners and funding identified.

This phase of the project will secure certain implementation and contruction funds that can also leverage Army Corp Adjacent Waters and/or other funds. Feasibility of the island restoration continues with existing funds. The island project will progress from conceptual, through feasibility, and complete the design while tracking Phase One elements. This proposal will provide funds to implement and construct the preferred design, from reviewed and approved 90% construction plans. The existing monitoring plan will be augmented for the island. This project takes place within the Skokomish Indian Reservation and supports treaty- protected resources.

WRIA 16 BMP Implementation

The Skokomish River system provides valuable habitat for species of fish such as Chinook, Coho, and chum salmon; steelhead; and various trout. Chinook salmon and summer chum in this basin are listed. The Skokomish River Detailed Implementation Plan, (Hempleman, DOE, 2/03, pg. 5) states that “agricultural practices are likely the primary source of bacteria in the area of most concern.” Poor agricultural practices are linked to water quality problems and degraded salmon habitat. High levels of nutrient loading, streambank erosion issues and loss of riparian cover result. Several water bodies are 303(d) listed under the Clean Water Act.

Agricultural activities and riparian vegetation removal have contributed to higher stream temperatures, lower dissolved oxygen, increased fecal coliform contamination, and over all water quality degradation. Mason Conservation District (MCD) plays a central role in improving agricultural practices within WRIA 16 area. In response to the Skokomish River Detailed Implementation Plan (TMDL), Mason Conservation District will provide technical and financial assistance to landowners in WRIA 16 area. MCD will provide conservation plans and technical support to implement best management practices that protect water quality and salmon habitat. The MCD will work with farms throughout the

WRIA 16 area. Without these funds, MCD will have no dedicated funds to assist Skokomish Valley agricultural landowners after December 31, 2007.

Skokomish General Investigation

The vision of the study is to improving the Skokomish River environment for fish and people. The purpose of the feasibility phase of project development is to investigate formulating a solution to address ecosystem restoration and flood damage reduction. The objective is to restore proper natural function to the basin while minimizing flood damages to valley residents including the Tribe. The work includes formulating alternative solutions, evaluating costs and benefits, preparing initial designs, and recommending a plan to intiate solutions to the problem. The feasibility study will investigate and identify solutions to identified water resources problems and recommend either for or against Federal authorization and implementation of an ecosystem restoration and flood damage reduction project. Phase One has been completed assessing current condition.

Phase Two will develop project alternatives in conjunction with local County and Tribal residents. Phase Three will develop the selected alternatives with preliminary engineering and environmental review, resulting in a 10% engineering design and environmental impact statement for the selected projects. The fianl feasibility report will provide a complete presentation of the study analysis and results, including those developed in the reconnaissance report. The feasibility report will thus be the basis for decision on the federal authorization, as well as the basis for decision making at the State and local level.

WRIA 16 Knotweed Inventory and Treatment

In of 2007, the DOT notified the Skokomish Tribe that they had identified the LARGEST knotweed grove in the state within the Skokomish. This is a huge problem in WRIA 16 for many reasons. Compared to native plant species, knotweed shows a decreased ability to control erosion despite having an extensive root system. During flood events, plant fragments can be washed downstream where rhizome and stem pieces create new infestations. Increased sediment is a factor in the loss of productive salmonid habitat. Sediment can fill in the spaces between riverbed gravels that salmonids utilize for spawning and fill in pools used for rearing. It also negatively affects salmonids by smothering viable eggs, decreasing their feeding success, and damaging gill filaments Knotweed also affects aquatic invertebrates that compose the basis of the aquatic food chain. The food chain is disrupted by an alteration of the quality and timing of the leaf litter regime. This alteration changes nutrient inputs and soil composition. Invertebrates are the primary food source of juvenile fish species. Limiting factors of salmonid production include elevated stream temperature, increased silt loads, poor riparian conditions, poor floodplain conditions, and a lack of large woody debris. According to the Three year watershed implementation Priorities for Hood canal Coordinating Council; it is a regional priority to control noxious weeds, including Knotweed. The goal is to identify all infestations and treat.

Skokomish Confluence Reach Restoration Design

The Skokomish Confluence Reach restoration builds on large-scale conservation effort to restore ESA-listed chinook & summer chum salmon and steelhead & bull trout. Decades of upland land use and lower valley levee construction have created a severely aggraded stream bed and caused channel avulsion through an agricultural pasture. The aggraded stream bed has gone dry for several consecutive years creating a complete fish passage barrier during the chinook and summer chum salmon migration period, eliminating around 20 miles of spawning habitat in the South Fork.

We propose to assess current conditions and develop a comprehensive plan in consultation with Mason County, Mason CD, NRCS, and the USACE to remove over 1 km of levee, restore over 2 km of new mainstem channel, restore nearly 3 km of riparian habitats, and help plan for potential channel improvements to the old aggraded channel. We will contract with external engineers, etc to integrate with the existing hydraulic model to determine potential restoration scenarios and define effects of flooding, with results integrated into a final construction plan by professional restoration ecologists. Final designs will be determined and implemented by a committee of stakeholders, possibly in conjunction with the General Investigation. This grant request will focus on "design only" of in-stream, floodplain, and riparian restoration, and will provide a clear road map for construction activities to follow.

Five Mile Creek LWD

This is a project to place about 320' of LWD on the right bank of the 5-Mile Creek/Skokomish South Fork confluence to maintain stream connectivity and provide covered habitat for endangered Salmon, Steelhead and Bull Trout, especially during summer low-flow periods. The project is comprised of a series of four log jams that will be anchored by buried LWD stems and tied to the stream bank. They will be placed strategically to maintain summer low-flow access from the Skokomish South Fork to 5-Mile Creek. Temperature surveys reveal S. Fork summer water temperatures are too high, causing stress for fish, while 5-Mile Creek ground-fed waters remain cool. However, the mouth of 5-Mile Creek is normally blocked by sediment during summer low-flows. LWD placement at the stream mouth will cause scour to maintain access between the S. Fork and 5-mile Creek. Also, Hood Canal Coordinating Council's (HCCC) Salmon Habitat Recovery Strategy identifies lack of LWD as a limiting factor in the Skokomish South Fork. The HCCC Recovery Strategy also recommends placement of LWD and logjams for reconnection of freshwater off-channel habitat and restoring channel habitat complexity. In extreme flow conditions, endangered fish species become trapped in areas that are not connected to the main river channels. This project will correct this condition at the mouth of 5-Mile Creek. HCCC Salmon Recovery Strategies cited include v3-2004 and v9.2005.

Vance Creek Restoration Design

There is a need to address ecosystem restoration and to restore natural function in the Vance Creek basin. The Vance Creek reach assessment and design will investigate geomorphic processes and fluvial dynamics of a southeast Olympic Peninsula river and floodplain. Specific studies have been performed in certain areas of the river for other

investigations. The project will synthesize and compile such studies using a gap analysis that will provide a baseline foundational structure for further feasibility implementations. Feasibility investigations will include areas for habitat and floodplain enhancement, restoration and acquisition of both fee simple title and habitat easements. Channel migration zones will be identified as well as disturbed or disconnected off-channel areas that may be subjected to re-establishment with floodplain processes. Fluvial modeling will be conducted and current channel locations, cross-sections and site specific aggradation of the streambed will analyzed. The watershed hosts three listed stocks of fish including Puget Sound chinook, Puget Sound Steelhead and Hood Canal summer chum. This project proposal will generate an overall assessment of the Vance Creek Watershed and an engineered project to be implemented by the project sponsor.

Upper South Fork Skokomish LWD Phase 2

This project proposed by the Skokomish Tribe is to design/install log jam structures to enhance the density and distribution of natural large woody debris in the upper South Fork Skokomish River and to develop a more sinuous channel using excavators for placement and helicopters for transport wood to staging areas. This Phase II project intends to enhance the effectiveness of Phase I of this project that was funded during the 2006, 7th SRFB round.

The SF Skokomish River is located in Mason County and the Skokomish/Dosewallips WRIA 16 (Watershed Resource Inventory Area}. It drains an area of approximately 129 sq miles (includes Vance Creek) with coniferous forests being the primary land cover. The majority of the SF Skokomish River is located within the Olympic National Forest with about 14% of the lower basin owned by the Green Diamond Resource Company (formerly Simpson Timber Co.). Tacoma Power owns a critical parcel in the proposed restoration reach. A small portion of the headwaters are located in the Olympic National Park. The lower 3 miles are located in the Skokomish Valley and are dominated by residential development and agriculture.

The primary reach targeted for log jams include an area between the canyon and LeBar Creek (Homan Flats) that was cleared for a proposed dam/reservoir in the 1950's-70's but never built. Riparian forests and uplands in this reach and throughout the basin have been heavily roaded/logged and have reduced wood supplies.

Duckabush Robinson Road Levee Removal

The Duckabush River Robinson Road Levee Removal project will remove 565 feet of levee system on Washington Department of Fish and Wildlife land to restore 2.6 acres of salt marsh. This project will restore natural tidal hydrology to one of Hood Canal's most pristine river delta systems in a watershed that is home to ESA-listed chinook, steelhead, summer chum, and bull trout. This project is listed as a near-term action in both the Mid-Hood Canal chinook salmon and Hood Canal/Eastern Strait summer chum salmon recovery plans. A setback levee may be needed to protect adjacent private property, though that component of the project will be determined during the final design phase. Further conversations with the adjacent landowner are ongoing as an engineering survey

has been ordered to determine if or how far a setback levee is required to protect the landowner's property.

Dosewallips and Duckabush Engineered Log Jam Design

This project proposes to design a program for large woody debris supplementation in the Forest Service reaches of the Dosewallips and Duckabush Rivers. The outcome of the project will be site specific designs for 8-10 large engineered log jams in the upper anadromous reaches of each of these rivers (16-20 ELJs total). Fish habitat in both rivers has been severely impacted by former land use practices, specifically the clearing of wood from the rivers and the logging of riparian forests. This has led to decreased pool frequency, floodplain connectivity, and instream sediment stability, as well as a lack of instream rearing habitat for juvenile fish. The Dosewallips River Habitat Assessment (2005) characterizes that river as moderately impaired with a projected near-term shortfall of key LWD piece recruitment to the river, and though smaller LWD is relatively abundant in the river, this wood is highly mobile and generally does not form stable, persistent wood jams, conditions in the Duckabush are similar.

This program will consist of two phases; the first will include the assessment and design work that is necessary for the implementation of a large scale instream construction project, the second phase will be the construction of the engineered log jams. This application is only for the first phase of the project, with a desired outcome of instream construction designs to the 30% level, which will be used to apply for regulatory permits.

Mid-Hood Canal Acquisition

Using fee simple property purchases, the project will permanently protect and make available for restoration Priority 1 salmonid habitat in the Dosewallips and Duckabush Rivers. Jefferson County will continue its efforts to protect and restore valuable floodplain and estuary habitat in the Mid Hood Canal ESU by working with local residents, homeowner associations, and a fire protection district to purchase and restore shoreline parcels on these two rivers. Targeted areas contain important habitat elements such as streams or side channels used by six species of salmonids including three species listed as "threatened" under the Endangered Species Act: Hood Canal summer chum, Puget Sound Chinook, and Puget Sound steelhead.

The targeted Duckabush properties are located at the upper extent of the estuary and immediately upstream. They include a tributary, wetlands, and floodplain forest in the Olympic Canal Tracts. The Dosewallips target properties are adjacent to 75+ acres of productive floodplain habitat purchased previously by Jefferson County using SRFB funding. They include main stem, tributary and/or side channel shorelines all of which are considered Category A salmon refugia. This project will protect intact floodplain forests and slopes, remove improvements and threats to water quality from parcels at risk of continued flooding, prevent shoreline armoring and deforestation in an area that is increasingly popular with summer RV'ers and home builders.

Lower Dosewallips Estuary and Floodplain Restoration

The Wild Fish Conservancy is proposing a continuation of a habitat restoration project at the mouth of the Dosewallips River. The Dosewallips River, the second largest tributary watershed to the Hood Canal, is used extensively by three ESA listed species: Puget Sound Chinook, Puget Sound steelhead, and Hood Canal summer chum. Several regional salmon recovery planning efforts have recognized the Dosewallips watershed as offering one of the best chances for effective salmon habitat protection and recovery.

Although the upper river basin is pristine due to its protection within Olympic National Park, the lower reaches of the river have experienced severe habitat degradation. In this reach of the river, banks armoring, large woody debris removal, and dredging have all contributed to the disruption of geomorphologic processes such as lateral channel migration and erosion and sedimentation, leading to reduced habitat quality in the river and estuary.

In this phase of the project we will remove 1000 ft of bank armoring and levee, and recreate a natural shoreline with woody debris and riparian plantings. This will restore natural process to over 5 acres of historic floodplain. Additionally, we will conduct a geomorphological reach analysis to assess the potential for geomorphic work in the lowest reach. This will be used to further target selected reaches for the removal of bank armoring and to site large woody debris placement.

Right Smart Cove Acquisition and Restoration

Wild Fish Conservancy proposes a restoration project in Right Smart Cove, an 11-acre low energy coastal lagoon, or pocket estuary, 3 miles north of the Dosewallips River. Pocket estuaries are known to be important for juvenile salmon as rearing and foraging habitats that provide refuge from predators. This is especially true of species with fry migrant life histories such as ESA listed Hood Canal summer chum and Puget Sound chinook salmon as well as coho and pink salmon.

Although Right Smart Cove is still accessible to juvenile salmon, many of its important biotic functions have been disrupted by human activities. In addition to being partially filled, the cove's uplands have been cleared and used for agriculture. These modifications have served to reduce tidal circulation and allochthonous input to the system.

The Wild Fish Conservancy is proposing a restoration project in RSC that will remove 1 acre of fill from the estuary and restore native vegetation communities, expanding tidal prism and increasing allochthonous inputs. In addition to strengthening energetic linkages between terrestrial, estuarine and nearshore habitats, the proposed actions should result in an increase in the strength of geomorphic processes which act to create and maintain salmonid habitat in the nearshore.

WDFW Big Quilcene Estuarine Levee Removal

The WDFW Big Quilcene Estuarine Dike Removal project is positioned in the Intertidal Zone and the Beach (sub-tidal zone). The entire Quilcene Estuarine Wetlands Restoration and Protection Project will return 50 acres of coastal wetland habitats to properly functioning conditions for the benefit of numerous healthy and imperiled fish and wildlife species. The project is identified in the Hood Canal/Water Resources Inventory Area (WRIA) 17 Limiting Factors Analysis (Washington State Conservation Commission 2002) as a Tier 1 (most important habitat), Priority 1 (most important

project) project for the recovery of several Hood Canal salmonid species listed as "threatened" under the Endangered Species Act.
Work will be accomplished by 1) Completely removing approximately 2,000 feet of saltwater levee surrounding an abandoned WDFW Fish Pond, 3) reestablishing a properly functioning tidal channel network, and 4) reestablishing appropriate plant communities upon adjacent emergent wetlands. The restored estuarine wetlands will be conserved in perpetuity using a conservation easement.

Big Quilcene LWD Restoration Phase 2

The project is the next phase for construction sequencing identified in the 2002 SRRB funded Quilcene River Reach Analysis and Feasibility Study by Herrera Environmental Consultants (2004). Phase 1 is targeted for construction this summer. The main goal of the Skokomish Tribal Nation's efforts in the restoration reach is to improve the diversity and value of habitat in the Big Quilcene River. The Quilcene River contains ESA listed Hood Canal summer run chum, fall chum, coho, steelhead and coastal cutthroat. Restoration work is required to reverse the adverse effects of past clearing, logging, diking, dredging, and bank armoring that have occurred in this reach over the last 50 years. These activities have resulted in a straightened river corridor, which has induced channel incision because of higher velocities and gradients. These activities have also resulted in a loss of river connectivity with the floodplain and secondary channels due to the lowered riverbed. The loss of sinuosity and connectivity with the floodplain has also resulted in a reduction in habitat complexity because of the elimination of pools and a reduction in access to floodplain vegetation and wood recruitment. The intent behind the proposed restoration is to reverse these trends through a series of constructed grade controls, log jams and apex bar jams that will recruit wood and aggrade the channel, diffuse flood peaks, increase pool frequency and promote channel complexity and sinuosity.

Ward Property Acquisition in Quilcene Bay

The Little Quilcene River along with the Big Quilcene River estuary represents some of the most significant estuarine/saltmarsh areas in this marine complex and has been impacted by the construction of a dike system nearly 100 years ago. The estuary supports sustaining populations of chinook, pink, chum, steelhead, coho, sturgeon, and cutthroat, yet dikes have disturbed tidal function on a significant portion of this estuary (LFA, 2003). The diking limits the amount of mesohaline habitat available to salmon fry, and this disturbance of the natural flow regime reduces juvenile chum access to the marshes and inhibits prey production (Ames et al. 2000).

We intend to acquire an adjacent parcel to one that was purchased through the SRFB by Jefferson County which unifies the North side of the Little Quilcene River and estuary from the Center Road Bridge to the Quilcene Bay. This will lead to further breaching of the north Little Quilcene River Dike and continue the protection of vital salmonid habitat leading to long term habitat protection.

Tarboo-Dabob Bay Acquisition and Restoration

This project will permanently preserve and restore exceptionally high quality nearshore habitat (coastal saltmarsh spit pocket estuary, high intertidal, and forested shoreline habitat) for federally listed summer chum salmon and Chinook salmon. The proposed 50 acres of nearshore habitat represent the most threatened and biologically significant private and county owned parcels that are part of a larger Tarboo-Dabob Bay Conservation Project in north Hood Canal. In previous phases, completed from 1992 through 2007, properties totaling 875 acres were protected from the headwaters to the estuary. The proposed project will secure three threatened properties that are a critical first step in forming a continuous nature preserve surrounding Tarboo-Dabob Bay to provide long-term and comprehensive protection for juvenile salmon in the Tarboo-Dabob estuary as a whole.

Chimacum Creek S-Curve Conservation

Jefferson Land Trust is applying for SRFB funds for the acquisition of two properties and a conservation easement on parcels located in the lower mainstem of Chimacum Creek. The lower mainstem and the estuary of Chimacum Creek provide important spawning habitat for summer chum salmon and are utilized by coho salmon, cutthroat trout and steelhead as rearing and feeding habitat. The subject properties provide approximately 2.5 acres of intact forested riparian habitat and are part of a larger project area that has been the focus of protection, enhancement and restoration efforts on the part of numerous agencies and organizations, including Washington Department of Fish and Wildlife, Jefferson County, North Olympic Salmon Coalition, Jefferson County Conservation District, Trout Unlimited, Hood Canal Coordinating Council, Washington State University Cooperative Extension, Jefferson Land Trust and others. Over 155 acres have been acquired for permanent protection located both upstream and downstream of the subject properties. We currently have the opportunity to work with willing sellers to permanently protect these important connective parcels through fee simple and conservation easement acquisition.

Port Townsend Bay Shoreline Acquisition

The Port Townsend Bay Shoreline Acquisition Project protects existing high quality nearshore habitat used by summer chum and coho salmon and the associated uplands that support healthy habitat functions and processes. This acquisition will add to Old Fort Townsend State Park: a) 45 acres of intact tidelands via a conservation easement (CE) stretching north along Glen Cove for 4,600 ft; b) 30 acres of forest uplands in fee ownership; and c) a CE preserving 175 acres of wooded uplands in perpetuity. The tidelands, shoreline, and associated uplands offer natural habitat conditions indicative of low human disturbance areas and contains naturally eroding bluffs that provide sediments to sustain healthy forage fish spawning beach habitat (documented on site), and 25 acres of eelgrass beds. The shoreline is relatively pristine, free of development, and forested for its entirety. Protecting the subject property's marine intertidal habitat will preserve an abundant high quality source of important highly utilized nearshore habitat that serves as a food source, refuge, and nursery habitat for the nearby Chimacum Creek native summer chum and coho salmon runs. If this acquisition fails it is likely that the land owner (now

in bankruptcy) will be forced to sell the property for development. Nearby waterfront property is zoned one house per five acres with no sewer service.

Salmon Estuary Wood Waste Removal

The Salmon Estuary Wood Waste Removal and Restoration project is designed to remove toxic leachate-producing wood waste from the nearshore environment and to increase the amount of estuarine habitat for juvenile salmonids, especially summer chum. Wood waste was placed atop the historic estuary at the head of Discovery Bay mid-century during a brief history of log peeling and veneer making at the site. Ground water seeping through the wood waste 'leaches' natural chemicals from the wood waste that become toxic in such large quantities. Leachates are creating toxic conditions for aquatic life in an existing tidal channel adjacent to the wood waste pile. In order to improve water quality, the wood waste must be removed prior to construction of the estuarine surface. Backfilling will be necessary to achieve the final elevation as the historic surface has subsided under the weight of the wood waste, and deeper areas suggest pits were dug to accommodate the wood waste.

This project is critical to the success of other phases of estuarine restoration at this location. A fill removal and estuary restoration project was designed and funded to remove collapsing buildings and the fill they were built atop. Through soils investigations for that project, the wood waste problem was discovered. Removing wood waste will improve water quality in all phases of this project to support salmonids and their food web.

Snow/Salmon Riparian 2007

Projects located in the lower reaches of Snow & Salmon Cr. at south end of Discovery Bay in Summer Chum & steelhead spawning reaches. Projects funded through previous grants, including SRFB, have established the buffers to be planted through purchase & conservation easements on 4 properties. The next phase is to plant these buffers w/trees, shrubs to create forested riparian buffers. Livestock have access to 800' of Salmon Cr. – a livestock bridge, livestock water systems and fences will result in no livestock access to this reach. Specific problems addressed are limited existing forested riparian buffers along the streams & livestock access to summer chum spawning habitat - project will increase size of forested buffers, resulting in improved water temperature and LWD recruitment and exclude livestock from spawning habitat. Targeted species are summer chum, coho, steelhead, cutthroat. Lack of forested riparian buffers and livestock access to stream are limiting factors for salmon recovery. One solar powered in-stream pump and one well supplied off-stream water supply for livestock will be constructed since buffer's/fencing excludes them from drinking from stream.

Marine Riparian Initiative

Marine riparian vegetation is trending downward, a fact that can be halted and reversed with new programs to educate landowners and replant areas where vegetation has been diminished. The Marine Riparian Initiative (MRI), an outgrowth of the Hood Canal Coordinating Council's Community Nearshore Restoration Program (CNRP), seeks to work proactively and on a voluntary basis with public and private landowners to provide

information on the functions of marine riparian areas; technical advice on native planting plans and exotic vegetation control plans; free plants; and support for plant installation.

During our first phase of the MRI we worked with hundreds of volunteers donating 1300 hours of time, completed 26 revegetation projects, worked with 13 agencies, and learned that there is always at least one thing that a landowner can do on their land to improve functioning habitat. During this phase, we will improve at least 2 miles of shoreline, work on at least 40 parcels of land with citizen stewards, and improve participant behaviors.

Marine riparian vegetation is important to salmon in that it provides direct foraging opportunities (e.g. chinook foraging on winged insects), indirect foraging opportunities (e.g. increase survival of surf smelt spawn, eaten later by salmonids, orcas, etc.), and improvements to nearshore habitats (e.g. recruitment of large woody debris and leaf litter to the shoreline.)

Nearshore Juvenile Salmon Assessment

In order to fill data gaps in the Summer Chum Salmon Recovery Plan and, eventually, the Chinook Salmon Recovery Plans, as well as to help in further prioritizing nearshore salmon habitat recovery actions, the HCCC proposes to implement the first year of a multi-year assessment to better understand juvenile salmonid distribution, habitat requirements, behavior, and behavioral forcing factors during their early marine life stages.

We will work collaboratively to assess our ability to effectively mark summer chum cohorts in temporal and spatial scales to learn more about individuals and subpopulations. We will develop protocols for marking juveniles, and assess mark retention, marking survival, and our ability to recapture marked individuals. We will also begin field surveys of these marked subpopulations throughout the range of their nearshore habitats, and will coordinate with other, on-going fish surveys in other parts of Hood Canal, Puget Sound, and the Strait of Juan de Fuca.

A scope of work will also be developed for the second year of surveys in 2009 and a funding strategy will be developed and implemented to allow us to continue to pursue this program through a broadly supported effort.